



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,572	12/21/2000	Scott D. Wollenweber	390086.94596	2026

7590 02/09/2004

Michael A. Jaskolski  
Quarles and Brady LLP  
411 East Wisconsin Ave  
Milwaukee, WI 53202

EXAMINER

DESIRE, GREGORY M

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 02/09/2004

h

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/745,572

Applicant(s)

WOLLENWEBER, SCOTT D.

Examiner

Gregory M. Desire

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosugi (6,334,708) in view of Nutt et.al. (6,631,284).

Regarding apparatus and method claims 1 and 12 Kosugi discloses,

At least one sensor for sensing the position of at least one table segment as the table extended from the support and into the imaging area (note fig. 3 block 12 and col. 3 lines 29-47 and col. 4 lines 45-47, position sensor detects position of movable positions, bed moves in various positions).

A determiner for using the position signals to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition (note col. 5 lines 51-53, memory determines the position of detector).

A compensator using the at least one relative position to modify at least one of the data sets prior to sets being combined to form a unified image (note col. 5 lines 15-17 and 25-30, controller performs adjustment of relative position).

Kosugi is silent disclosing a dual imaging system including a first and second imaging configurations to collect a first and second data sets. However, Nutt discloses

Art Unit: 2625

dual imaging system including a first and second imaging configurations to collect a first and second data sets (note fig. 2a in connection with col. 12 lines 26-30, shows dual imaging configuration PET scanner first data set CT scanner second data set).

Therefore it would have been obvious to one having ordinary skills in the art to include a dual imaging system in the system of Kosugi as evidenced by Nutt. Kosugi detects positional data of bed and Nutt in the same field of endeavor obtaining more accurate data information (note Nutt col. 10 lines 28-300

As to apparatus and method claims 19 and 21 Kosugi discloses,

A first sensor for sensing the vertical position of at least a first table segment as the table is extended from the support into the imaging area (note col. 3 lines 35-36, 40-46 and col. 4 lines 45-47, bed top provides a table segment, sensor senses vertical direction F of bed as imaging is performed).

A second sensor for sensing the vertical position of at least a second table segment as the table is extended from the support into the imaging area (note col. 3 lines 45-36, 40-46, and col. 4 lines 45-47, sensor senses many positions and moving bed top in longitude direction provides a second table segment, thus the bed can be moved in a vertical position).

Regarding claim 2 Kosugi and Nutt discloses,

Wherein the first configuration is a functional configuration for obtaining imaging data corresponding to a dynamic characteristic (Nutt fig 2a 14, PET scanner useful for dynamic characteristic) and a second configuration is a static configuration for obtaining

Art Unit: 2625

data corresponding to a static characteristic (Nutt fig. 2a 12 CT scanner useful for static information).

Regarding apparatus and method claims 3 and 20 Kosugi and Nutt discloses,

Wherein the static configuration (Nutt fig. 2a, 12) is positioned between the support (Nutt fig. 2a table support under table 18) and the functional configuration (Nutt fig. 2a, 14).

Regarding apparatus and method claims 4 and 13 Kosugi and Nutt discloses,

Wherein the sensor is positioned adjacent the functional configuration and opposite the static configuration (note Nutt fig. 2a between 12 and 14 there is a detector positioned adjacent and opposite the configuration);

Regarding apparatus and method claims 5 and 14 Kosugi and Nutt discloses,

Wherein the at least one sensor is a first sensor and the apparatus further includes at least a second sensor that senses the position of at least a second table segment and, wherein, the determiner also uses position signals from the second sensor to determine the relative position (note Kosugi col. 4 lines 40-47). Plurality of sensor, bed top is segment of table.

Regarding apparatus and method claims 6 and 15 Kosugi and Nutt discloses,

Wherein the second sensor is positioned between the functional and static configuration (note Nutt fig. 2a, shows 2 detectors and positioned between functional and static configuration).

Regarding apparatus and method claims 7 and 16 Kosugi and Nutt discloses,

Wherein the determiner determines the relative positions of each of the functional and static detectors with respect to the table (note col. 5 lines 51-53, memory determines and stores the position of detector of scanner with respect to the bed) and the compensator uses each of the relative positions to modify at least one of the data sets prior to the sets being combined to form a functional/static image (note col. 5 lines 15-17 and 25-30, controller performs adjustment of relative position).

Regarding apparatus and method claims 8 and 17 Kosugi and Nutt discloses,

Wherein the compensator modifies each of the functional and static data sets prior to combining (note Nutt col. 13 lines 8-20, the scaling and reconstruction modifies data set prior to combining).

Regarding apparatus and method claims 9 and 18 Kosugi and Nutt discloses,

Wherein each of the first and second sensor senses the vertical position of the table with respect to a fixed reference point and the position signals indicate the reference point to vertical table position distance (note Kosugi col. 3 lines 35-38, position sensor senses vertical position of the bed).

Regarding claim 11 Kosugi and Nutt discloses,

Wherein the at least one sensor is a first sensor positioned adjacent the system and opposite the support (Nutt fig. 2a sensor opposite the table support) and the apparatus further includes at least a second sensor positioned between the first and second configurations that senses the position of at least a second table segment (note Nutt fig. 2a detector between CT and PET).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosugi and Nutt in further view of Fujita (5,482,042).

Regarding claim 10 Kosugi and Nutt discloses,

Position sensor, Kosugi and Nutt is silent teaching sensors are selected from a group consisting of laser sensors, ultrasonic sensor, light sensors, optical sensors, magnetic sensors and resistive sensor. However, Fujita teaches a medical imaging apparatus, wherein position sensor is an ultrasonic sensor (note fig. 1 block 22 in connection with col. 4 lines 16-17). Therefore it would have been obvious to one having ordinary skills in the art to include ultrasonic sensor in the system of Kosugi and Nutt as evidenced by Fujita. Kosugi and Nutt teach positional sensor in a medical imaging apparatus and Fujita in the same field of endeavor uses ultrasonic sensor for a more accurate diagnosis of positional relationship among the imaging data obtained (note col. 2 lines 20-35).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (703) 308-9586. The examiner can normally be reached on M-F (8:30-6:00) Second Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's G.supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory M. Desire  
Examiner  
Art Unit 2625

G.D.  
February 4, 2004

  
**BHAVESH M. MEHTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**